A/B, I, 42, 3

6 November 1951

MEMORANDUM FOR: Projects Review Committee

SUBJECT : Proposed External Research Project with [redacted]

B

1. It is proposed to establish an external research project with the [redacted] through the [redacted] Attached are papers providing background information on the project and an advance copy of the proposal to be submitted by [redacted]

2. This research will profitably contribute to Project "Artichoke" which was approved by the Deputy Director for Central Intelligence on 13 March 1951. The funds should be made available upon completion of negotiations with the [redacted] for expenditure during FY-1952. Authorization for the funds to carry over into FY-1953, if necessary, should be provided.

3. There are no administrative support requirements within the Agency other than those already provided for in the budgets of the offices concerned.

4. The project will be implemented by transfer of funds to the [redacted] The [redacted] will establish the project on an unclassified basis and monitor it in accordance with their standard procedures. In the fiscal negotiations with the [redacted] the cost for their services in monitoring the project, if any, should be investigated.

5. This project was brought to our attention by, and is fully coordinated with, the [redacted]

6. This project has been coordinated with DD(Plans), and the Assistant Directors of [redacted]

Attach:

ATTACHMENT I

BACKGROUND INFORMATION ON

B PROPOSED RESEARCH PROJECT WITH [redacted]

1. The project involves research and development of a new technique known as "side tone delay", as an aid to interrogations. The technique does not solve the interrogation problem but will, if successfully developed, provide a useful device under certain conditions. As such it will make a useful contribution to certain aspects of Project Artichoke.

B 2. The project was suggested by [redacted] to the
B [redacted] where it was referred to the [redacted]
B [redacted]. Representatives of the [redacted]
C [redacted] feel that this is a promising device
B which warrants development. However, they state that [redacted] has committed all of the funds they will have available for this purpose in FY-1952. They feel that this is a matter in which CIA could make a useful contribution in the community interest and from which CIA might realize considerable benefit.

B 3. [redacted] has suggested that, should CIA wish to undertake the project,
B the Agency should deal directly with [redacted]. The [redacted] contact,
C [redacted], advises that his office would be willing to administer the project on an unclassified basis except that his office will classify as secret any negotiations with CIA and the fact that CIA has an interest in the matter.

ATTACHMENT 2

C ADVANCE COPY OF _____ PROPOSAL TO

B BE SUBMITTED TO THE _____

B _____, engaged in the development and application of interrogation methods as used primarily in personnel and criminal investigations, proposes that it conduct research in the application of side tone delay to interrogation techniques.

Side tone delay and its effect on the speech control of a subject was

D described independently by _____ and by _____ in 1950. It was found that speaking difficulty is experienced by a subject when his speech is delayed a fraction of a second in traveling to his ears.

Preliminary experiments in our laboratory indicate that side tone delay will be useful in accelerating the process of obtaining desired information from subjects who have given positive guilt responses under polygraph examination. The available evidence bears out the basic postulate of the author of this proposal that the effects of side tone delay when applied during the telling of a lie will lead the subject to the independent and erroneous conclusion that his speech difficulty has made his guilt obvious to the examiner. The subject's association of guilt with his lack of speech control is a natural mistake since the effects of side tone delay are similar to the manifestations of guilt of an inexpert liar (stuttering, stammering, confusion, etc.). On the other hand an innocent subject suffers only a temporary confusion and it does not appear possible that false self-incrimination can result.

Preliminary experiments have indicated the need for the investigation of several factors in the development of side tone delay as an interrogation aid.

1. It will be necessary to study the optimum degree of delay. D _____ conclusions in this regard were based on his study of word list reading and do not appear to apply accurately under the conditions of importance here. Furthermore, it may be that optimum results will attend the use of a variable cycling delay.

2. Since present polygraph interrogation technique requires that monosyllabic replies only be given by the subject it is clear that this method of questioning is not adapted to the purpose at hand. Therefore the development of a questioning technique that will, among other things, tend to require lengthy and detailed answers will be of prime importance. Preliminary experiments have shown that this will be a difficult problem.

3. It may be possible to initiate and control side tone delay by means of polygraph responses. Thus an abnormal response, through a suitable linkage, would introduce and proportion the delay. With the additional tension in the subject that this would develop it might be found that a sort of regenerative amplification process would tend to take place, which if obtainable, would, of course, hasten the breaking down of the subject.

4. The use of side tone delay without devices attached to the subject appears to be of importance for those applications where an appearance that normal interviewing techniques are in use, is desirable. The considerable benefits that would result indicate the importance of investigating combinations of directional microphones and focussing speaker arrangements to this end.

The principal investigator will be

The Polygraph records overt and covert muscular contractions and muscular pressures asserted by the subject which detects efforts to beat the test.

With this instrument new decision criteria was noted and the number of inconclusive reports were substantially reduced. introduced a completely new questioning technique in lie detection which simplifies the interpretation of the test records and is now widely used by examiners.

The full time services of an assistant investigator, under the direction of [redacted] will be utilized. The services of the firm of [redacted] will be retained to carry on the instrument and apparatus research and development. This firm will utilize full time an instrument engineer for this purpose under the direction of [redacted].

[redacted]

It is estimated that the program will require one year for completion and it is proposed that it be carried out under a fixed price contract covering the following items:

1.	**Salaries**		
	A. _____, Principal investigator - No charge		
	B. Assistant investigator - Full time	$ 7500.	
	C. Secretary - One-third time	1200.	$ 8700.
2.	**Materials expendable**		
	A. Chart paper	200.	
	B. Instrument repair parts	250.	450.
3.	**Capital Equipment**		
	A. Polygraph instrument	1700.	
		775.	2475.
4.	**Travel**		
	A. 3 trips to Washington @ $125.00	375.	375.
5.	**Reports**		
	A. Multigraphing	850.	
		500.	1350.
6.	**Shipping Classified Material**	100.	100.
7.	**A.D.T. Security System**	800.	800,
8.	**Overhead, 50% of salaries**	4350.	4350.
9.	**Services of _____**		
	A. Salaries		
	a. Director, _____ - No charge		
	b. Instrument Engineer - Full time	7500.	
	c. Secretary - One-third time	1200.	$ 8700.
	B. Materials expendable		
	a. Metal bar stock, sheet, etc.	300.	
	b. Electronic and sound components	2000.	2300,
	C. Capital items		
	a. Tape recorder for modification	775.	775.
	D. Travel		
	a. Three trips to Washington, D. C.	375.	375.
	E. Overhead, 40% of salaries	3480.	3480.
			15630.
	Total		$34230.